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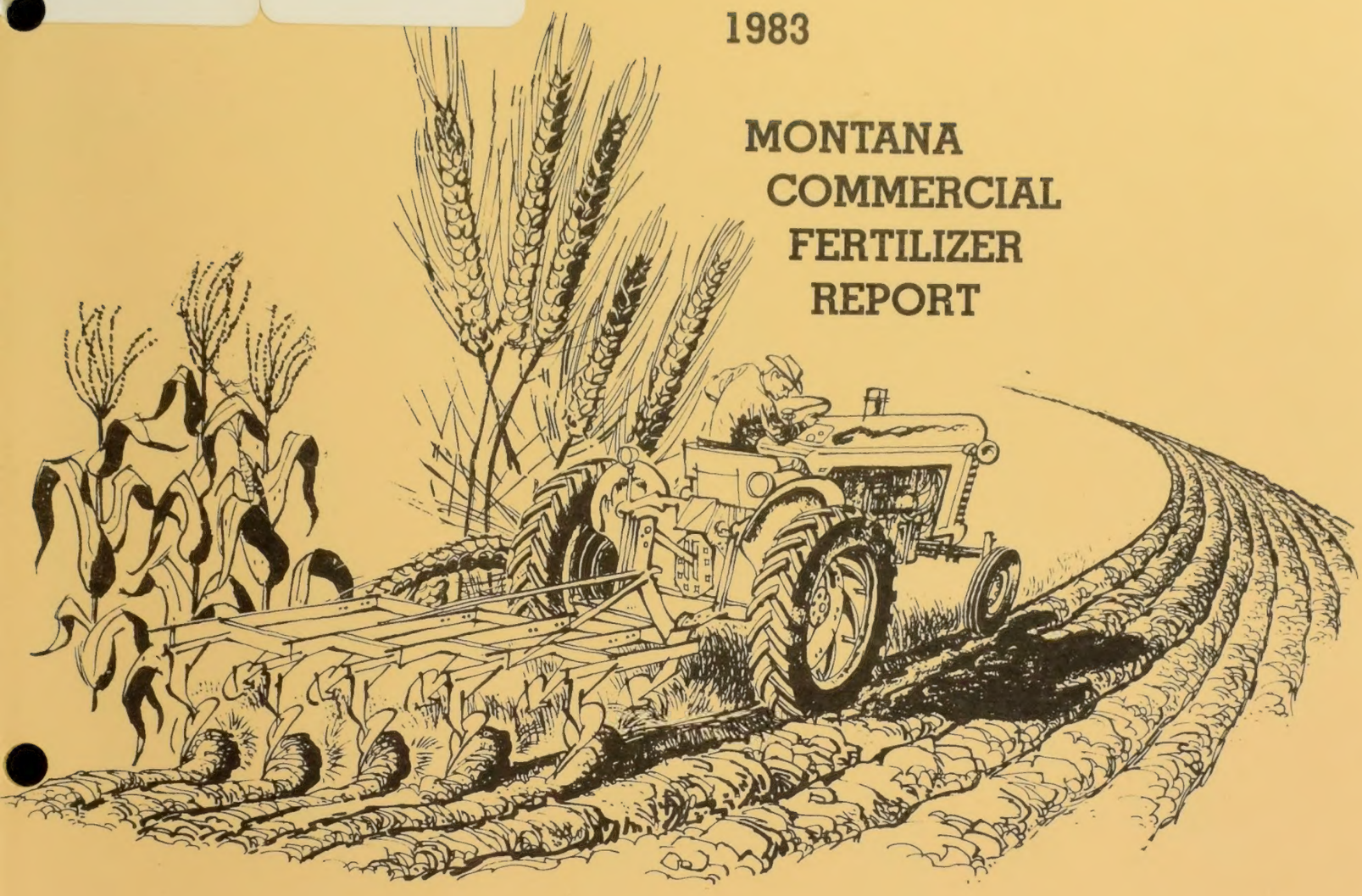
MONTANA COMMERCIAL FERTILIZER REPORT



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MONTANA DEPARTMENT OF AGRICULTURE

Plant Industry Division

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This report consists of the following sections:

Commercial.....Pages 1-18

Specialty.....Pages 18-20

Statistical.....Pages 21-24

Abbreviations used:

P_2O_5.....available phosphoric acid

K_2O.....soluble potash

C.....claimed

F.....found

ppm.....parts per million

*.....deficiency

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COMMERCIAL FERTILIZER ANALYSIS

MANUFACTURER/DISTRIBUTOR BRAND/PRODUCT NAME	PLACE OF COLLECTION	SAMPLE NUMBER	BAG/ BULK	NITROGEN C	NITROGEN F	P_2O_5 C	P_2O_5 F	K_2O C	K_2O F	MICRONUTRIENT	MICRONUTRIENT C	MICRONUTRIENT F
AGRI-BASICS COMPANY Omaha, Nebraska												
34-0-0	Hysham	6824	bulk	34	34.3							
18-46-0	Hysham	6825	bulk	18	17.5	46	46.1					
AGRI-BASICS COMPANY Box 112 Belgrade, MT 59714												
.....	Belgrade	6609	blend	22.2	22.4	16.7	21.0			Zinc	1.7	1.8
11-53-0	Wilsall	6814	bulk	11	11.4	53	53.1					
16-20-0	Deer Lodge	6879	bulk	16	15.8	20	21.4					
AGRI-BASICS COMPANY Box 221 Cut Bank, MT 59427												
0-0-60	Cut Bank	6759	bulk					60	62.1			
11-53-0	Kalispell	7121	bulk	11	11.0	53	53.9					
AGRI-BASICS COMPANY Box 571 Havre, MT 59501												
0-0-60	Hingham	6770	bulk					60	60.1			
46-0-0	Hingham	6772	bulk	46	46.1							
0-0-60	Hingham	7092	bulk					60	58.4*			
46-0-0	Hingham	7093	bulk	46	46.5							
46-0-0	Havre	7101	bulk	46	46.4							
AGRI-BASICS COMPANY Box 2548 Great Falls, MT 59403												
11-53-0	Fort Benton	6864	bulk	11	10.4	53	51.5*					
0-0-60	Fort Benton	6865	bulk					60	60.9			
0-45-0	Fort Benton	6866	bulk			45	45.6					
46-0-0	Fort Benton	6867	bulk	46	46.1							
46-0-0	Great Falls	6976	bulk	46	46.1							
AGRI-BASICS COMPANY Box 774 Lewistown, MT 59457												
26-13-0	Lewistown	6675	bagged	26	25.9	13	13.0					
46-0-0	Lewistown	6934	bulk	46	45.9							

COMMERCIAL FERTILIZER ANALYSIS

MANUFACTURER/DISTRIBUTOR BRAND/PRODUCT NAME	PLACE OF COLLECTION	SAMPLE NUMBER	BAG/ BULK	NITROGEN C	NITROGEN F	P_2O_5 C	P_2O_5 F	K_2O C	K_2O F	MICRONUTRIENT	MICRONUTRIENT C	MICRONUTRIENT F
AGRI-BASICS COMPANY Box 1279 Miles City, MT 59301												
9-27-0	Miles City	7006	bulk	9	8.9	27	27.5					
34-0-0	Miles City	7007	bulk	34	34.4							
AGRI-BASICS COMPANY Box B Moore, MT 59464												
18-46-0	Moore	6726	bulk	18	17.9	46	47.5					
46-0-0	Moore	6728	bulk	46	46.3							
0-0-62	Moore	6730	bulk					62	60.5			
21-0-0	Stanford	6739	bulk	21	20.9					Sulfur	24	24.5
AGRI-BASICS COMPANY Ryegate, MT 59074												
Engro & Ortho 34-0-0	Ryegate	6953	bulk	34	34.0							
AGRI-BASICS COMPANY Box 551 Sidney, MT 59720												
9-30-0	Sidney	7021	bulk	9	8.3*	30	30.0					
AGRI FEEDS & SERVICE 1518 Dodge Helena, MT 59601												
16-20-0	Helena	6666	bulk	16	16.0	20	20.9					
11-53-0	Helena	6667	bulk	11	10.9	53	53.5					
BAYER INDUSTRIES, CORPORATION Box 5700 Greenwich, CT 06836												
18-46-0	Geraldine	6572	bulk	18	16.9*	46	47.0					
11-53-0	Fort Benton	6587	bulk	11	10.7	53	54.6					
11-53-0	Havre	6595	bulk	11	10.8	53	53.9					
18-46-0	Havre	6597	bulk	18	17.1*	46	46.9					
11-53-0	Belgrade	6612	bulk	11	10.6	53	53.0					
18-46-0	Belgrade	6614	bulk	18	17.3	46	47.0					
11-53-0	Three Forks	6632	bulk	11	10.6	53	54.0					
18-46-0	Three Forks	6635	bulk	18	17.0*	46	46.7					
18-46-0	Lewistown	6668	bulk	18	17.3	46	47.2					
11-53-0	Lewistown	6671	bulk	11	10.6	53	53.2					

MANUFACTURER/DISTRIBUTOR BRAND/PRODUCT NAME	PLACE OF COLLECTION	SAMPLE NUMBER	BAG/ BULK	NITROGEN C	NITROGEN F	P_2O_5 C	P_2O_5 F	K_2O C	K_2O F	MICRONUTRIENT C	MICRONUTRIENT F
BEKER INDUSTRIES, CORPORATION (continued)											
18-46-0	Wolf Point	6695	bulk	18	17.3	46	46.9				
18-46-0	Sidney	6699	bulk	18	16.7*	46	47.1				
11-52-0	Sidney	6701	bulk	11	10.3*	52	51.3				
18-46-0	Lambert	6702	bulk	18	17.4	46	46.2				
18-46-0	Denton	6720	bulk	18	17.6	46	47.0				
11-53-0	Moore	6732	bulk	11	10.6	53	53.6				
18-46-0	Moore	6733	bulk	18	17.3	46	47.0				
18-46-0	Stanford	6737	bulk	18	17.6	46	46.8				
11-53-0	Valier	6746	bulk	11	11.1	53	53.6				
18-46-0	Valier	6747	bulk	18	17.1*	46	47.0				
11-53-0	Cut Bank	6753	bulk	11	10.6	53	53.9				
18-46-0	Cut Bank	6756	bulk	18	18.0	46	46.7				
18-46-0	Cut Bank	6761	bulk	18	17.2*	46	46.2				
11-53-0	Cut Bank	6763	bulk	11	10.8	53	53.8				
18-46-0	Shelby	6765	bulk	18	17.2*	46	46.1				
18-46-0	Jordan	6827	bulk	18	16.7	46	46.5				
11-53-0	Great Falls	6838	bulk	11	10.9	53	52.5				
18-46-0	Great Falls	6840	bulk	18	17.2*	46	46.0				
11-52-0	Black Eagle	6843	bulk	11	10.6	52	52.4				
11-53-0	Billings	6850	bulk	11	11.3	53	51.9*				
11-53-0	Geraldine	6859	bulk	11	10.5	53	53.9				
11-53-0	Fort Benton	6868	bulk	11	11.0	53	53.3				
11-53-0	Carter	6872	bulk	11	10.7	53	54.2				
11-53-0	Belgrade	6880	bulk	11	10.7	53	54.0				
18-46-0	Belgrade	6882	bulk	18	18.0	46	47.3				
11-53-0	Conrad	6900	bulk	11	11.2	53	53.3				
11-53-0	Conrad	6914	bulk	11	10.7	53	53.2				
18-46-0	Conrad	6915	bulk	18	17.2*	46	45.7				
11-53-0	Lewistown	6933	bulk	11	11.0	53	53.6				
18-46-0	Denton	6942	bulk	18	17.9	46	45.9				
18-46-0	Ryegate	6954	bulk	18	17.4	46	45.8				
11-53-0	Ryegate	6955	bulk	11	10.7	53	53.1				
11-53-0	Belgrade	6966	bulk	11	11.1	53	53.4				
11-53-0	Great Falls	6967	bulk	11	11.4	53	53.6				
18-46-0	Great Falls	6970	bulk	18	17.4	46	45.8				
16-20-0	Great Falls	6972	bulk	16	15.2	20	20.7				
11-53-0	Great Falls	6977	bulk	11	11.0	53	52.7				
11-53-0	Helena	6984	bulk	11	11.0	53	51.4*				
Beker 18-46-0	Wolf Point	6988	bulk	18	17.5	46	46.0				
Beker 11-53-0	Wolf Point	6989	bulk	11	10.9	53	53.7				
Cenex 18-46-0	Circle	6990	bulk	18	16.6*	46	46.1				
Cenex 18-46-0	Fairview	6992	bulk	18	18.1	46	46.1				

COMMERCIAL FERTILIZER ANALYSIS

MANUFACTURER/DISTRIBUTOR BRAND/PRODUCT NAME	PLACE OF COLLECTION	SAMPLE NUMBER	BAG/ BULK	NITROGEN C	NITROGEN F	P_2O_5 C	P_2O_5 F	K_2O C	K_2O F	MICRONUTRIENT C	MICRONUTRIENT F
BEKER INDUSTRIES, CORPORATION (continued)											
11-53-0	Reserve	7015	bulk	11	11.3	53	53.0				
18-46-0	Reserve	7016	bulk	18	17.5	46	46.2				
18-46-0	Sidney	7023	bulk	18	17.9	46	46.2				
11-53-0	Sidney	7024	bulk	11	11.0	53	52.4				
18-46-0	Billings	7038	bulk	18	17.9	46	46.9				
11-53-0	Valier	7054	bulk	11	11.2	53	53.4				
11-51-0	Valier	7055	bulk	11	11.1	51	51.0				
18-46-0	Valier	7056	bulk	18	17.3	46	46.0				
18-46-0	Shelby	7079	bulk	18	18.1	46	46.3				
18-46-0	Chester	7084	bulk	18	18.1	46	46.4				
46-0-0	Chester	7085	bulk	46	46.2						
11-53-0	Rudyard	7086	bulk	11	11.1	53	54.3				
11-53-0	Hardin	7032	bulk	11	10.9	53	52.7				
11-53-0	Billings	7040	bulk	11	11.2	53	53.1				
18-46-0	Cut Bank	7069	bulk	18	17.4	46	46.0				
18-46-0	Cut Bank	7073	bulk	18	17.4	46	45.8				
18-46-0	Havre	7098	bulk	18	17.9	46	46.2				
11-53-0	Big Sandy	7108	bulk	11	11.1	53	53.6				
18-46-0	Big Sandy	7109	bulk	18	17.5	46	45.6				
34-0-0	Big Sandy	7110	bulk	34	34.3						
CARGILL, INC. Box 779 Lewistown, MT 59457											
	Lewistown	6689	blend	20.6	18.5*	20.6	25.0	8.3	8.4		
CARGILL, INC. Box 9300 Minneapolis, MN 55440											
46-0-0	Sidney	7019	bulk	46	46.5						
18-46-0	Sidney	7020	bulk	18	18.4	46	46.1				
CARGILL, INC. Box 217 Valier, MT 59486											
18-46-0	Valier	6750	bulk	18	17.9	46	47.9				
11-52-0	Valier	6751	bulk	11	11.0	52	52.4				
CHEVRON CHEMICAL COMPANY 940 Hensley Street Richmond, CA 94804											
Ortho 34-0-0	Belgrade	6608	bulk	34	34.1						
Ortho 34-0-0	Three Forks	6631	bulk	34	34.2						

MANUFACTURER/DISTRIBUTOR BRAND/PRODUCT NAME	PLACE OF COLLECTION	SAMPLE NUMBER	BAG/ BULK	NITROGEN C	NITROGEN F	P_2O_5 C	P_2O_5 F	K_2O C	K_2O F	MICRONUTRIENT	MICRONUTRIENT C	MICRONUTRIENT F
CHEVRON CHEMICAL COMPANY (continued)												
34-0-0	Hamilton	6655	bulk	34	34.2							
Unipel 27-12-0	Hamilton	6661	bulk	27	26.5	12	13.0			Sulfur	4.5	5.0
34-0-0	Stevensville	6662	bulk	34	34.1							
Ortho 34-0-0	Lewistown	6687	bulk	34	34.1							
Ortho 34-0-0	Sidney	6700	bulk	34	34.1							
Ortho 34-0-0	Miles City	6705	bulk	34	34.5							
Ortho 34-0-0	Harlowton	6714	bulk	34	33.9							
Ortho 34-0-0	Moore	6731	bulk	34	33.9							
Ortho(liqd.)12-6-6	Sidney	6786	liquid	12	13.6	6	6.3	6	5.8			
Ortho(pkg.) 12-6-6	Sidney	6788	package	12	11.9	6	6.7	6	6.2			
Ortho 8-8-8	Sidney	6787	package	8	8.8	8	8.8	8	8.1			
Ortho 8-12-4	Sidney	6789	package	8	7.1	12	11.8	4	4.3			
Ortho 5-10-10	Sidney	6790	package	5	6.5	10	11.3	10	11.4			
Ortho 34-0-0	Kalispell	6794	bulk	34	34.2							
Ortho 34-0-0	Kalispell	6795	bulk	34	34.0							
Unipel 30-0-0	Kalispell	6797	bulk	30	29.4					Sulfur	6.5	6.9
Unipel 30-0-0	Kalispell	6800	bulk	30	29.5					Sulfur	6.5	6.6
Ortho 16-16-16	Ronan	6817	bulk	16	15.4	16	16.4	16	16.3	Sulfur	2.7	2.8
Ortho Ammonium Nitrate 34-0-0	Ronan	6818	bulk	34	34.1							
34-0-0	Great Falls	6841	bulk	34	33.9							
Ortho 34-0-0	Billings	6849	bulk	34	33.9							
34-0-0	Carter	6871	bulk	34	33.9							
16-20-0	Belgrade	6878	bulk	16	15.9	20	19.8			Sulfur	14	15.8
Unipel 30-0-0	Dillon	6886	bulk	30	29.9					Sulfur	6.5	6.7
34-0-0	Dillon	6888	bulk	34	34.0							
16-20-0	Dillon	6889	bulk	16	15.9	20	20.9			Sulfur	15	15.4
32-0-0	Conrad	6907	bulk	32	31.3							
16-20-0	Conrad	6916	bulk	16	16.0	20	20.8					
Ortho 34-0-0	Lewistown	6948	bulk	34	34.1							
34-0-0	Great Falls	6968	bulk	34	34.4							
Ortho 34-0-0	Helena	6985	bulk	34	34.0							
Ortho 16-20-0	Helena	6986	bulk	16	15.7	20	20.5					
Ortho 16-20-0	Miles City	7008	bulk	16	16.0	20	21.9					
Ortho 34-0-0	Sidney	7022	bulk	34	34.3							
Ortho 16-20-0	Billings	7037	bulk	16	15.8	20	20.7					
Ortho Ammonium Nitrate 34-0-0	Ronan	7112	bulk	34	34.2							
Ortho 16-16-16	Ronan	7113	bulk	16	15.7	16	15.9	16	16.1			

COMMERCIAL FERTILIZER ANALYSIS

MANUFACTURER/DISTRIBUTOR BRAND/PRODUCT NAME	PLACE OF COLLECTION	SAMPLE NUMBER	BAG/ BULK	NITROGEN C	NITROGEN F	P_2O_5 C	P_2O_5 F	K_2O C	K_2O F	MICRONUTRIENT	MICRONUTRIENT C	MICRONUTRIENT F
COMINCO AMERICAN INCORPORATED Box 3087 Spokane, WA 99220												
Elephant 46-0-0	Culbertson	6564	bulk	46	46.2							
Elephant 11-55-0	Culbertson	6565	bulk	11	11.0	55	56.3					
11-55-0	Geraldine	6575	bulk	11	11.2	55	56.7					
Elephant 46-0-0	Fort Benton	6583	bulk	46	46.0							
Elephant 21-0-0	Belgrade	6611	bulk	21	20.9					Sulfur	24	24.6
Elephant 21-0-0	Three Forks	6633	bulk	21	21.0							
Elephant 11-55-0	Billings	6649	bulk	11	11.2	55	55.7					
16-20-0	Hamilton	6656	bulk	16	16.3	20	21.1			Sulfur	14	15.8
0-0-60	Hamilton	6657	bulk					60	60.5			
Elephant 16-20-0	Lewistown	6676	bulk	16	23.6	20	20.5					
Elephant 21-0-0	Lewistown	6677	bulk	21	21.0					Sulfur	24	25.1
Elephant 0-0-60	Lewistown	6678	bulk					60	63.2			
Elephant 37-0-0	Lewistown	6679	bulk	37	36.2					Sulfur	20	21.0
Elephant 46-0-0	Lewistown	6680	bulk	46	45.9							
Elephant 11-55-0	Lewistown	6681	bulk	11	11.3	55	56.1					
Elephant 0-0-60	Lewistown	6685	bulk					60	60.2			
Elephant 21-0-0	Glasgow	6692	bulk	21	21.0							
Elephant 0-0-60	Harlowton	6713	bulk					60	59.7			
Elephant 21-0-0	Denton	6715	bulk	21	21.0					Sulfur	24	24.7
Elephant 0-0-60	Denton	6716	bulk					60	62.4			
Elephant 11-55-0	Denton	6721	bulk	11	11.2	55	55.5					
Elephant 0-0-60	Denton	6722	bulk					60	60.1			
Elephant 46-0-0	Denton	6723	bulk	46	46.4							
Elephant 46-0-0	Stanford	6734	bulk	46	46.2							
Elephant 11-55-0	Denton	6735	bulk	11	11.2	55	55.0					
Elephant 36-0-0	Stanford	6736	bulk	36	36.5					Sulfur	20	20.6
Elephant 0-0-60	Stanford	6738	bulk					60	60.1			
Elephant 21-0-0	Valier	6744	bulk	21	21.0							
21-0-0	Cut Bank	6762	bulk	21	20.9					Sulfur	24	24.7
46-0-0	Shelby	6766	bulk	46	46.1							
16-20-0	Shelby	6767	bulk	16	16.3	20	20.8					
11-55-0	Shelby	6768	bulk	11	11.3	55	55.6					
0-0-6	Shelby	6769	bulk					60	60.3			
Cominco Elephant prill 11-55-0	Kalispell	6796	bulk	11	11.0	55	52.5					
Cominco prill 16-20-0	Kalispell	6798	bulk	16	16.4	20	21.0			Sulfur	14	15.3
Cominco prill 16-20-0	Kalispell	6801	bulk	16	16.4	20	20.0			Sulfur	14	15.9
Elephant granular 0-0-60	Kalispell	6802	bulk					60	62.2			
35-17-10	Wilsall	6815	bulk	35	36.8	17	15.6*					
Elephant 46-0-0	Wilsall	6816	bulk	46	46.2							

MANUFACTURER/DISTRIBUTOR BRAND/PRODUCT NAME	PLACE OF COLLECTION	SAMPLE NUMBER	BAG/ BULK	NITROGEN C	NITROGEN F	P_2O_5 C	P_2O_5 F	K_2O C	K_2O F	MICRONUTRIENT	MICRONUTRIENT C	MICRONUTRIENT F
COMINCO AMERICAN INCORPORATED (continued)												
Elephant 11-55-0	Ronan	6819	bulk	11	11.2	55	53.0*					
Elephant 0-0-60	Ronan	6820	bulk					60	60.3			
Elephant 21-0-0	Ronan	6822	bulk	21	20.9					Sulfur	24	24.7
Elephant 16-20-0	Ronan	6823	bulk	16	16.3	20	19.8			Sulfur	15	15.9
0-0-60	Great Falls	6839	bulk					60	60.2			
46-0-0	Fort Benton	6869	bulk	46	46.1							
0-0-62	Fort Benton	6870	bulk					62	63.3			
Elephant 46-0-0	Carter	6873	bulk	46	46.0							
11-55-0	Carter	6874	bulk	11	11.0	55	54.8					
0-0-60	Belgrade	6881	bulk					60	61.1			
Elephant 21-0-0	Belgrade	6883	bulk	21	20.9					Sulfur	24	24.7
11-55-0	Conrad	6910	bulk	11	11.3	55	55.0					
21-0-0	Power	6931	bulk	21	20.9					Sulfur	24	24.9
Elephant 21-0-0	Lewistown	6936	bulk	21	20.9					Sulfur	24	24.8
Elephant 11-55-0	Denton	6943	bulk	11	11.1	55	55.2					
Elephant 46-0-0	Denton	6944	bulk	46	46.4							
Elephant 0-0-60	Denton	6945	bulk					60	61.0			
Elephant 0-0-60	Harlowton	6951	bulk					60	60.8			
21-0-0	Great Falls	6969	bulk	21	21.0					Sulfur	24	24.7
0-0-60	Great Falls	6971	bulk					60	60.9			
Elephant 0-0-62	Reserve	7018	bulk					62	61.9			
21-0-0	Valier	7057	bulk	21	21.0							
11-55-0	Cut Bank	7068	bulk	11	11.2	55	55.5					
46-0-0	Cut Bank	7072	bulk	46	46.4							
21-0-0	Cut Bank	7074	bulk	21	21.0					Sulfur	24	24.1
46-0-0	Shelby	7077	bulk	46	46.4							
16-20-0	Shelby	7078	bulk	16	16.4	20	20.7					
11-55-0	Shelby	7080	bulk	11	11.1	55	55.9					
0-0-60	Shelby	7081	bulk					60	60.5			
21-0-0	Rudyard	7090	bulk	21	21.0					Sulfur	24	24.8
11-55-0	Havre	7097	bulk	11	11.2	55	55.2					
21-0-0	Havre	7099	bulk	21	21.0					Sulfur	24	24.1
0-0-60	Havre	7100	bulk					60	60.5			
Elephant 0-0-60	Ronan	7111	bulk					60	60.9			
Elephant 11-55-0	Ronan	7120	bulk	11	11.2	55	55.0					
Elephant granual 0-0-60	Kalispell	7126	bulk					60	61.7			
Elephant prill 11-55-0	Kalispell	7127	bulk	11	11.2	55	55.3					
Elephant prill 16-20-0	Kalispell	7128	bulk	16	16.5	20	20.2					
Elephant prill 11-55-0	Kalispell	7129	bulk	11	11.3	55	55.0					

COMMERCIAL FERTILIZER ANALYSIS

MANUFACTURER/DISTRIBUTOR BRAND/PRODUCT NAME	PLACE OF COLLECTION	SAMPLE NUMBER	BAG/ BULK	NITROGEN C	NITROGEN F	P_2O_5 C	P_2O_5 F	K_2O C	K_2O F	MICRONUTRIENT	MICRONUTRIENT C	MICRONUTRIENT F
DILLON FERTILIZER COMPANY 2100 Highway 91 North Dillon, MT 59725												
BLEND	Dillon	6621	blend	10.45	10.0	49.4	50.4			Sulfur	5	6.3
EXXON CHEMICAL AMERICAS Box 3272 Houston, TX 77001												
Engro 34-0-0	Belgrade	6610	bulk	34	34.2							
Engro 16-20-0	Belgrade	6613	bulk	16	16.0	20	20.5			Sulfur	14	14.7
Engro 34-0-0	Townsend	6626	bulk	34	34.1							
Engro 11-51-0	Townsend	6627	bagged	11	11.4	51	52.6					
Engro 16-20-0	Townsend	6628	bagged	16	16.3	20	20.9			Sulfur	14	14.6
Engro 34-0-0	Billings	6636	bulk	34	34.0							
Engro 16-20-0	Billings	6639	bulk	16	16.2	20	20.4					
Engro 34-0-0	Billings	6650	bagged	34	34.3							
Engro 11-51-0	Billings	6651	bagged	11	11.7	51	52.2					
Engro 18-46-0	Billings	6652	bagged	18	18.0	46	48.3					
Engro 16-20-0	Billings	6653	bagged	16	16.4	20	22.9					
Engro 46-0-0	Lewistown	6672	bulk	46	46.1							
Engro 11-51-0	Lewistown	6673	bagged	11	11.5	51	51.5					
Engro 18-46-0	Lewistown	6674	bagged	18	17.9	46	48.6					
Engro 46-0-0	Wolf Point	6696	bulk	46	46.2							
Engro 34-0-0	Billings	6852	bulk	34	34.1							
Engro 34-0-0	Belgrade	6884	bulk	34	34.2							
Engro 46-0-0	Conrad	6913	bulk	46	45.9							
Cenex 34-0-0	Fairview	6994	bulk	34	34.4							
46-0-0	Reserve	7017	bulk	46	46.5							
46-0-0	Cut Bank	7066	bulk	46	46.4							
FARMERS UNION CENTRAL EXCHANGE Box 43087 St. Paul, MN 55164												
Cenex 11-51-0	Miles City	6566	bulk	11	10.7	51	52.6					
18-46-0	Miles City	6567	bulk	18	17.9	46	48.0					
46-0-0	Miles City	6568	bulk	46	46.0							
11-51-0	Circle	6569	bulk	11	10.9	51	51.0					
Cenex 18-46-0	Circle	6570	bulk	18	17.1*	46	46.6					
0-0-60	Circle	6571	bulk					60	61.0			
34-0-0	Geraldine	6577	bulk	34	34.0							
0-0-60	Geraldine	6578	bulk					60	60.6			
18-46-0	Geraldine	6579	bulk	18	17.8	46	48.4					
11-51-0	Geraldine	6580	bulk	11	10.8	51	51.3					

MANUFACTURER/DISTRIBUTOR BRAND/PRODUCT NAME	PLACE OF COLLECTION	SAMPLE NUMBER	BAG/ BULK	NITROGEN C	NITROGEN F	P_2O_5 C	P_2O_5 F	K_2O C	K_2O F	MICRONUTRIENT	MICRONUTRIENT C	MICRONUTRIENT F
FARMERS UNION CENTRAL EXCHANGE (continued)												
46-0-0	Fort Benton	6584	bulk	46	45.9							
18-46-0	Chinook	6589	bulk	18	18.0	46	47.5					
46-0-0	Chinook	6590	bulk	46	46.0							
0-45-0	Chinook	6591	bulk			45	46.8					
11-51-0	Chinook	6592	bulk	11	10.8	51	52.5					
0-0-60	Chinook	6593	bulk					60	60.6			
16-20-0	Chinook	6594	bulk	16	15.9	20	21.8					
46-0-0	Havre	6598	bulk	46	46.0							
18-46-0	Havre	6599	bulk	18	17.1*	46	47.5					
11-51-0	Havre	6600	bulk	11	11.0	51	51.6					
46-0-0	Havre	6601	bulk	46	46.2							
18-46-0	Big Sandy	6603	bulk	18	17.4	46	46.5					
11-51-0	Big Sandy	6604	bulk	11	11.0	51	51.6					
46-0-0	Big Sandy	6605	bulk	46	45.6							
21-0-0	Big Sandy	6606	bulk	21	21.0					Sulfur	24	24.6
0-0-60	Big Sandy	6607	bulk					60	61.8			
Cenex 0-0-60	Three Forks	6634	bulk					60	66.0			
46-0-0	Billings	6642	bulk	46	46.2							
Cenex 34-0-0	Billings	6643	bulk	34	31.6*							
Cenex 11-51-0	Billings	6644	bulk	11	11.2	51	51.7					
Cenex 21-0-0	Billings	6645	bulk	21	20.9					Sulfur	24	25.1
18-46-0	Billings	6647	bulk	18	17.1	46	46.9					
26-13-0	Billings	6654	bagged	26	26.0	13	14.4					
Cenex 11-51-0	Lewistown	6682	bulk	11	10.9	51	51.0					
Cenex 46-0-0	Lewistown	6683	bulk	46	46.0							
Cenex 18-46-0	Lewistown	6684	bulk	18	17.0	46	46.8					
Cenex 21-0-0	Hinsdale	6690	bulk	21	21.0							
Cenex 18-46-0	Hinsdale	6691	bulk	18	17.4	46	47.7					
Cenex 18-46-0	Wolf Point	6697	bulk	18	17.0*	46	46.8					
Cenex 46-0-0	Wolf Point	6698	bulk	46	46.4							
Cenex 18-46-0	Fallon	6708	bulk	18	17.7	46	47.5					
Cenex 0-44-0	Fallon	6709	bulk			44	47.1					
Cenex 34-0-0	Fallon	6710	bulk	34	34.2							
Cenex 11-51-0	Denton	6717	bulk	11	10.8	51	52.2					
Cenex 18-46-0	Denton	6718	bulk	18	17.4	46	47.3					
Cenex 46-0-0	Denton	6719	bulk	46	46.3							
Cenex 46-0-0	Moore	6724	bulk	46	46.1							
11-52-0	Moore	6725	bulk	11	10.9	52	52.5					
Cenex 0-0-60	Moore	6727	bulk					60	61.9			
Cenex 18-46-0	Stanford	6740	bulk	18	17.6	46	46.9					
Cenex 34-0-0	Stanford	6741	bulk	34	34.7							

COMMERCIAL FERTILIZER ANALYSIS

MANUFACTURER/DISTRIBUTOR BRAND/PRODUCT NAME	PLACE OF COLLECTION	SAMPLE NUMBER	BAG/ BULK	NITROGEN C	NITROGEN F	P_2O_5 C	P_2O_5 F	K_2O C	K_2O F	MICRONUTRIENT	MICRONUTRIENT C	MICRONUTRIENT F
FARMERS UNION CENTRAL EXCHANGE (continued)												
Cenex 34-0-0	Valier	6743	bulk	34	34.4							
11-51-0	Valier	6745	bulk	11	11.0	51	50.7					
Cenex 46-0-0	Valier	6749	bulk	46	46.4							
0-44-0	Valier	6752	bulk			44	46.0					
11-51-0	Cut Bank	6755	bulk	11	10.9	51	51.8					
46-0-0	Cut Bank	6758	bulk	46	46.2							
46-0-0	Cut Bank	6760	bulk	46	46.3							
11-51-0	Cut Bank	6764	bulk	11	10.9	51	51.7					
Cenex prill 0-44-0	Kalispell	6799	bulk			44	42.6*					
Cenex prill 18-46-0	Kalispell	6803	bulk	18	17.9	46	46.6					
Cenex 34-0-0	Kalispell	6804	bulk	34	34.2							
Cenex 0-0-50	Kalispell	6805	bulk					50	52.2	Sulfur	17	17.7
Cenex prill 11-52-0	Kalispell	6806	bulk	11	11.1	52	52.9					
Cenex 21-0-0	Kalispell	6807	bulk	21	20.9					Sulfur	24	24.5
Cenex 46-0-0	Plentywood	6829	bulk	46	46.3							
Cenex 18-46-0	Plentywood	6830	bulk	18	17.2	46	45.3					
Cenex 11-51-0	Plentywood	6831	bulk	11	10.8	51	50.6					
Cenex 46-0-0	Scobey	6832	bulk	46	45.9							
21-0-0	Scobey	6833	bulk	21	20.9					Sulfur	24	24.6
Cenex 18-46-0	Richland	6834	bulk	18	17.8	46	46.1					
34-0-0	Great Falls	6844	bulk	34	34.1							
46-0-0	Harlem	6845	bulk	46	46.0							
11-51-0	Harlem	6846	bulk	11	10.7	51	50.7					
Cenex 46-0-0	Billings	6848	bulk	46	45.9							
18-46-0	Geraldine	6854	bulk	18	17.7	46	46.7					
	Geraldine	6855	bulk							Sulfur	99	99.0
11-52-0	Geraldine	6856	bulk	11	10.9	52	52.4					
0-0-60	Geraldine	6857	bulk					60	60.8			
34-0-0	Geraldine	6858	bulk	34	33.8							
0-44-0	Belgrade	6875	bulk			44	45.0					
Cenex 46-0-0	Belgrade	6885	bulk	46	45.9							
21-0-0	Belgrade	6890	bulk	21	20.9							
0-0-60	Belgrade	6892	bulk					60	61.3			
Cenex 18-46-0	Belgrade	6893	bulk	18	17.8	46	46.7					
Cenex 11-52-0	Belgrade	6894	bulk	11	11.1	52	52.5					
18-46-0	Conrad	6902	bulk	18	17.0*	46	47.5					
16-20-0	Conrad	6903	bulk	16	15.9	20	20.9					
34-0-0	Conrad	6904	bulk	34	33.9							
11-51-0	Conrad	6905	bulk	11	10.9	51	51.6					
0-0-60	Conrad	6906	bulk					60	60.3			
46-0-0	Dutton	6920	bulk	46	46.0							

MANUFACTURER/DISTRIBUTOR BRAND/PRODUCT NAME	PLACE OF COLLECTION	SAMPLE NUMBER	BAG BULK	NITROGEN C	NITROGEN F	P_2O_5 C	P_2O_5 F	K_2O C	K_2O F	MICRONUTRIENT	MICRONUTRIENT C	MICRONUTRIENT F
FARMERS UNION CENTRAL EXCHANGE (continued)												
11-52-0	Dutton	6923	bulk	11	11.2	52	51.9					
18-46-0	Dutton	6924	bulk	18	18.1	46	46.1					
	Dutton	6926	bulk							Sulfur	90	89.0
Cenex 11-52-0	Denton	6937	bulk	11	11.2	52	52.1					
Cenex 18-46-0	Denton	6938	bulk	18	17.8	46	46.4					
Cenex 0-0-60	Denton	6939	bulk					60	60.4			
Cenex 46-0-0	Denton	6940	bulk	46	46.0							
Cenex 18-46-0	Denton	6941	bulk	18	18.0	46	45.8					
Cenex 0-0-60	Broadview	6956	bulk					60	60.0			
Cenex 46-0-0	Broadview	6957	bulk	46	45.9							
11-53-0	Broadview	6958	bulk	11	11.0	53	52.6					
Cenex 18-46-0	Broadview	6959	bulk	18	17.0*	46	46.4					
0-0-60	Great Falls	6975	bulk					60	60.5			
Cenex 34-0-0	Three Forks	6978	bulk	34	34.2							
Cenex 21-0-0	Three Forks	6979	bulk	21	20.9					Sulfur	14	24.6
Cenex 16-20-0	Three Forks	6980	bulk	16	16.2	20	20.7					
Cenex 18-46-0	Three Forks	6981	bulk	18	17.8	46	45.9					
Cenex 11-53-0	Three Forks	6982	bulk	11	10.9	53	53.2					
Cenex 0-0-60	Three Forks	6987	bulk					60	62.7			
Beker 11-52-0	Circle	6991	bulk	11	11.3	52	51.6					
Cenex 11-52-0	Fairview	6993	bulk	11	11.1	52	52.2					
Cenex 18-46-0	Baker	6998	bulk	18	18.1	46	46.3					
18-46-0	Baker	6999	bulk	18	17.9	46	46.3					
Cenex 46-0-0	Baker	7000	bulk	46	46.3							
Cenex 0-0-60	Baker	7001	bulk					60	60.6			
Cenex 18-46-0	Miles City	7002	bulk	18	17.8	46	46.5					
Cenex 18-46-0	Miles City	7003	bulk	18	18.1	46	46.6					
Cenex 46-0-0	Miles City	7004	bulk	46	46.3							
Cenex 0-0-60	Miles City	7005	bulk					60	60.5			
Cenex 18-46-0	Wolf Point	7012	bulk	18	17.9	46	46.6					
Cenex 46-0-0	Wolf Point	7013	bulk	46	46.4							
Cenex 11-51-0	Wolf Point	7014	bulk	11	11.2	51	52.6					
Cenex 16-20-0	Hardin	7025	bulk	16	16.2	20	20.5					
Cenex 18-46-0	Hardin	7026	bulk	18	18.0	46	46.0					
Cenex 46-0-0	Hardin	7027	bulk	46	46.8							
Cenex 0-0-60	Hardin	7028	bulk					60	61.4			
Cenex 11-52-0	Hardin	7029	bulk	11	11.2	52	52.6					
Cenex 46-0-0	Worden	7033	bulk	46	46.5							
Cenex 0-44-0	Worden	7034	bulk			44	46.1					
Cenex 21-0-0	Edgar	7047	bulk	21	21.0					Sulfur	24	24.7
Cenex 0-0-62	Edgar	7048	bulk					62	62.0			
Cenex 18-46-0	Edgar	7049	bulk	18	17.8	46	45.8					

MANUFACTURER/DISTRIBUTOR BRAND/PRODUCT NAME	PLACE OF COLLECTION	SAMPLE NUMBER	BAG/ BULK	NITROGEN C	NITROGEN F	P_2O_5 C	P_2O_5 F	K_2O C	K_2O F	MICRONUTRIENT	MICRONUTRIENT C	MICRONUTRIENT F
FARMERS UNION CENTRAL EXCHANGE (continued)												
Cenex 11-52-0	Edgar	7050	bulk	11	11.1	52	52.2					
Cenex 34-0-0	Edgar	7051	bulk	34	34.4							
46-0-0	Valier	7059	bulk	46	46.4							
0-0-60	Valier	7060	bulk					60	61.1			
18-46-0	Valier	7061	bulk	18	17.9	46	46.1					
11-52-0	Valier	7062	bulk	11	11.2	52	53.2					
0-44-0	Valier	7063	bulk			44	44.0					
46-0-0	Rudyard	7087	bulk	46	46.4							
16-20-0	Rudyard	7088	bulk	16	16.1	20	20.1			Sulfur	14	15.4
0-0-60	Rudyard	7089	bulk					60	62.1			
18-46-0	Rudyard	7091	bulk	18	18.0	46	46.3					
11-52-0	Havre	7102	bulk	11	11.7	52	51.6					
46-0-0	Havre	7103	bulk	46	46.4							
0-0-62	Havre	7104	bulk					62	63.3			
16-20-0	Havre	7105	bulk	16	16.0	20	21.0					
18-46-0	Big Sandy	7106	bulk	18	18.1	46	46.2					
46-0-0	Big Sandy	7107	bulk	46	46.5							
Cenex 21-0-0	Ronan	7114	bulk	21	21.0					Sulfur	24	24.6
Cenex 46-0-0	Ronan	7115	bulk	46	46.3							
Cenex 0-0-60	Ronan	7116	bulk					60	61.3			
Cenex 0-44-0	Ronan	7117	bulk			44	44.3					
Cenex 18-46-0	Ronan	7118	bulk	18	17.5	46	46.4					
Cenex prill 16-20-0	Kalispell	7123	bulk	16	15.8	20	21.1					
Cenex prill 34-0-0	Kalispell	7124	bulk	34	34.0							
Cenex prill 11-52-0	Kalispell	7125	bulk	11	11.0	52	52.8					
Cenex prill 34-0-0	Kalispell	7130	bulk	34	34.3							
FARMERS UNION GTA Box 176 Stanford, MT 59479												
	Stanford	6742	blend	27.9	24.8*	14	18.1					
FARMERS UNION GTA Box 205 Three Forks, MT 59752												
	Three Forks	6630	blend	21.8	21.7	8.7	8.9	8.7	11.3	Sulfur	8.1	7.3
FARMERS UNION OIL COMPANY Box 1226 Fort Benton, MT 59442												
0-0-62	Fort Benton	6588	bulk					62	62.1			

COMMERCIAL FERTILIZER ANALYSIS

MANUFACTURER/DISTRIBUTOR BRAND/PRODUCT NAME	PLACE OF COLLECTION	SAMPLE NUMBER	BAG/ BULK	NITROGEN C	NITROGEN F	P_2O_5 C	P_2O_5 F	K_2O C	K_2O F	MICRONUTRIENT	MICRONUTRIENT C	MICRONUTRIENT F
FARMERS UNION OIL COMPANY Box 2483 Great Falls, MT 59403												
34-0-0	Great Falls	6973	bulk	34	34.4							
21-0-0	Great Falls	6974	bulk	21	21.0							
FEED & FERTILIZER DEPOT Box 158 Miles City, MT 59301												
34-0-0	Miles City	7010	bulk	34	34.7							
GENERAL MILLS, INC. Box 1347 Fort Benton, MT 59442												
11-53-0	Fort Benton	6581	bulk	11	10.4	53	54.2					
0-45-0	Fort Benton	6582	bulk			45	45.0					
0-0-60	Fort Benton	6586	bulk					60	58.1*			
GREAT PLAINS CROP MANAGEMENT, INC. Box 115 Geraldine, MT 59446												
20-0-0	Geraldine	6863	bulk	20	20.3					Sulfur	3	3.3
GREENACRES GYPSUM & LIME COMPANY, INC. Box 250 Greenacres, WA 99016												
Gypsum	Ronan	6821								Sulfur Calcium	15 15	15.* 21.2
H.J. BAKER & SONS Anphelett Boulevard, Suite 121 San Mateo, CA 94402												
	Dillon	6877	bulk							Sulfur	95.5	97.6
H.J. BAKER 4969 East Clinton Avenue Fresno, CA 93727												
21-0-0	Moiese	7131	bulk	21	21.1					Sulfur	24	23.9
HARDIN FERTILIZER COMPANY 632 Railroad AVenue Hardin, MT 59034												
34-0-0	Hardin	7030	bulk	34	34.6							

COMMERCIAL FERTILIZER ANALYSIS

MANUFACTURER/DISTRIBUTOR BRAND/PRODUCT NAME	PLACE OF COLLECTION	SAMPLE NUMBER	BAG/ BULK	NITROGEN C	NITROGEN F	P_2O_5 C	P_2O_5 F	K_2O C	K_2O F	MICRONUTRIENT	MICRONUTRIENT C	MICRONUTRIENT F
HARVEST STATES COOP-LINE ELEVATOR Box 66 Valier, MT 59486												
34-0-0	Valier	7053	bulk	34	34.4							
HI-LINE FERTILIZER, INC. Box 228 Hingham, MT 59528												
10-34-0	Hingham	7096	liquid	10	10.2	34	34.7					
INTERNATIONAL MINERALS & CHEMICAL CORPORATION Box 207 Terre Haute, IN 47808												
Sulto Mag 0-0-22	Belgrade	6615	bulk					22	21.7	Sulfur Magnesium	22 18	23.1 11.8*
0-0-60	Billings	7036	bulk					60	60.8			
KALIUM CHEMICAL CORPORATION Box 95666 Atlanta, GA 30347												
0-0-62	Geraldine	6573	bulk					62	63.2			
0-0-62	Geraldine	6574	bulk					62	62.9			
0-0-60	Havre	6602	bulk					60	62.6			
0-0-61	Belgrade	6620	bulk					61	62.8			
0-0-60	Billings	6640	bulk					60	63.1			
Cenex 0-0-62	Billings	6646	bulk					62	62.0			
0-0-60	Lewistown	6670	bulk					60	64.3			
0-0-60	Valier	6748	bulk					60	62.5			
0-0-62	Cut Bank	6754	bulk					62	62.6			
0-0-60	Billings	6851	bulk					60	62.7			
0-0-62	Geraldine	6861	bulk					62	63.7			
0-0-62	Geraldine	6862	bulk					62	62.6			
0-0-60	Conrad	6901	bulk					60	62.1			
0-0-60	Conrad	6917	bulk					60	61.7			
0-0-62	Power	6927	bulk					62	62.2			
0-0-60	Lewistown	6935	bulk					60	61.8			
0-0-60	Ryegate	6952	bulk					60	61.8			
0-0-62	Belgrade	6965	bulk					62	60.4*			
0-0-62	Fairview	6997	bulk					62	62.0			
0-0-62	Billings	7041	bulk					62	63.2			
0-0-60	Valier	7058	bulk					60	61.8			
0-0-60	Cut Bank	7070	bulk					60	60.4			
0-0-60	Chester	7082	bulk					60	62.0			

MANUFACTURER/DISBRIBUTOR BRAND/PRODUCT NAME	PLACE OF COLLECTION	SAMPLE NUMBER	BAG/ BULK	NITROGEN C	NITROGEN F	P_2O_5 C	P_2O_5 F	K_2O C	K_2O F	MICRONUTRIENT	MICRONUTRIENT C	MICRONUTRIENT F
KERLEY CHEMICAL Box 6183 Kennewick, WA 99336												
12-0-0	Conrad	6899	liquid	12	12.1					Sulfur	26	25.6
MARTREX, INC. Box 1-G Minnetonka, MN 55343												
16-20-0	Conrad	6908	bulk	16	15.9	20	20.8					
0-0-60	Conrad	6911	bulk					60	60.3			
0-0-60	Helena	6983	bulk					60	61.3			
MON-KOTA, INC. Box 48 Fairview, MT 59221												
9-27-0	Fairview	6995	bulk liquid	9	8.9	27	27.5					
MONTANA SULPHUR & CHEMICAL COMPANY Box 31118 Billings, MT 59107												
	Conrad	6918	bagged							Sulfur	90	87.0*
	Valier	7064	bagged							Sulfur	99	97.0*
Yellowstone	Kalispell	7122	bulk							Sulfur	90	90.0
PHILLIPS CHEMICAL COMPANY Box 13349 Spokane, WA 99213												
32-0-0	Great Falls	6837	liquid	32	31.7							
32-0-0	Conrad	6898	liquid	32	31.4							
32-0-0	Belgrade	6964	liquid	32	31.4							
POWER FARMERS ELEVATOR COMPANY Box 215 Power, MT 59468												
34-0-0	Power	6928	bulk	34	34.1							
18-46-0	Power	6929	bulk	18	17.8	46	46.6					
11-53-0	Power	6930	bulk	11	11.1	53	52.3					
SELSTED SOIL SERVICE RR 5045 Great Falls, MT 59401												
10-34-0	Great Falls	6836	liquid	10	9.7	34	34.5					
10-34-0	Great Falls	6853	liquid	10	9.7	34	34.9					
10-34-0	Conrad	6897	liquid	10	10.9	34	31.6*					

COMMERCIAL FERTILIZER ANALYSIS

MANUFACTURER/DISTRIBUTOR BRAND/PRODUCT NAME	PLACE OF COLLECTION	SAMPLE NUMBER	BAG/ BULK	NITROGEN C	NITROGEN F	P_2O_5 C	P_2O_5 F	K_2O C	K_2O F	MICRONUTRIENT	MICRONUTRIENT C	MICRONUTRIENT F
SHERRITT FERTILIZERS, INC. 1220 North Jantzen Avenue, Suite 240 Portland, OR 97217												
46-0-0	Geraldine	6576	bulk	46	45.9							
21-0-0	Havre	6596	bulk	21	21.0							
21-0-0	Townsend	6624	bulk	21	20.9					Sulfur	24	25.0
21-0-0	Lewistown	6669	bulk	21	20.9					Sulfur	24	24.5
21-0-0	Moore	6729	bulk	21	19.5*					Sulfur	24	22.8*
21-0-0	Cut Bank	6757	bulk	21	21.0							
21-0-0	Great Falls	6842	bulk	21	20.9					Sulfur	24	24.7
46-0-0	Geraldine	6860	bulk	46	46.0							
21-0-0	Cut Bank	7065	bulk	21	21.0					Sulfur	24	24.8
28-0-0	Cut Bank	7075	liquid	28	28.4							
J. R. SIMPLOT Box 912 Pocatello, ID 83204												
34-0-0	Fort Benton	6585	bulk	34	34.1							
21-0-0	Dillon	6616	bulk	21	20.9							
18-46-0	Dillon	6617	bulk	18	18.0	46	48.0					
0-45-0	Dillon	6618	bulk			45	45.6					
16-20-0	Dillon	6619	bulk	16	13.9*	20	25.7					
34-0-0	Dillon	6622	bulk	34	34.3							
11-52-0	Dillon	6623	bulk	11	10.9	52	52.0					
Simplot 18-46-0	Townsend	6625	bulk	18	17.8	46	46.8					
Simplot 11-52-0	Billings	6637	bulk	11	11.0	52	53.0					
Simplot 18-46-0	Billings	6638	bulk	18	17.7	46	46.8					
Simplot 18-46-0	Billings	6641	bulk	18	18.5	46	47.0					
18-46-0	Stevensville	6658	bulk	18	17.9	46	47.7					
34-0-0	Stevensville	6659	bulk	34	34.2							
11-52-0	Hamilton	6660	bulk	11	11.0	52	53.4					
16-20-9	Stevensville	6663	bulk	16	16.1	20	22.9					
18-46-0	Stevensville	6664	bulk	18	18.0	46	46.6					
Simplot 11-52-0	Lewistown	6686	bulk	11	10.6	52	52.4					
Simplot 18-46-0	Lewistown	6688	bulk	18	17.9	46	48.5					
Simplot 18-46-0	Miles City	6703	bulk	18	17.9	46	46.7					
11-52-0	Miles City	6704	bulk	11	10.9	52	52.1					
Simplot 18-46-0	Miles City	6706	bulk	18	17.9	46	47.6					
Simplot 11-52-0	Miles City	6707	bulk	11	11.0	52	53.1					
Simplot 11-52-0	Harlowton	6711	bulk	11	11.1	52	53.2					
16-20-0	Harlowton	6712	bulk	16	16.1	20	21.3					
11-52-0	Hingham	6771	bulk	11	11.1	52	52.0					
18-46-0	Hingham	6773	bulk	18	18.1	46	47.7					

MANUFACTURER/DISTRIBUTOR BRAND/PRODUCT NAME	PLACE OF COLLECTION	SAMPLE NUMBER	BAG/ BULK	NITROGEN C	NITROGEN F	P_2O_5 C	P_2O_5 F	K_2O C	K_2O F	MICRONUTRIENT C	MICRONUTRIENT F
J. R. SIMPLOT (continued)											
Simplot 18-46-0	Billings	6847	bulk	18	18.2	46	47.1				
Simplot 0-45-0	Dillon	6876	bulk			45	44.7				
Simplot 11-52-0	Dillon	6887	bulk	11	11.2	52	52.2				
Simplot 16-20-0	Belgrade	6891	bulk	16	15.9	20	21.9				
34-0-0	Conrad	6909	bulk	34	34.1						
18-46-0	Conrad	6912	bulk	18	17.9	46	46.0				
11-52-0	Brady	6919	bulk	11	11.2	52	52.3				
Simplot 18-46-0	Lewistown	6932	bulk	18	18.0	46	46.3				
Simplot 18-46-0	Lewistown	6946	bulk	18	17.9	46	45.8				
Simplot 11-52-0	Lewistown	6947	bulk	11	11.1	52	52.3				
Simplot 11-52-0	Harlowton	6949	bulk	11	11.2	52	52.1				
Simplot 16-20-0	Harlowton	6950	bulk	16	16.2	20	20.9				
11-52-0	Dillon	6960	bulk	11	11.1	52	52.1				
21-0-0	Dillon	6961	bulk	21	20.9						
16-20-0	Dillon	6962	bulk	16	16.0	20	21.1				
Simplot 18-46-0	Fairview	6996	bulk	18	17.9	46	46.5				
Simplot 18-46-0	Miles City	7009	bulk	18	18.0	46	46.7				
Simplot 11-52-0	Miles City	7011	bulk	11	11.1	52	51.9				
Simplot 0-45-0	Hardin	7031	bulk			45	45.9				
Simplot 18-46-0	Worden	7035	bulk	18	18.0	46	46.2				
Simplot 18-46-0	Billings	7042	bulk	18	18.1	46	46.9				
Simplot 11-52-0	Billings	7043	bulk	11	11.1	52	52.4				
Simplot 16-20-0	Billings	7044	bulk	16	15.9	20	22.9				
Simplot 0-45-0	Billings	7045	bulk			45	44.9				
Simplot 34-0-0	Billings	7046	bulk	34	34.5						
11-52-0	Cut Bank	7067	bulk	11	11.2	52	52.7				
11-52-0	Cut Bank	7071	bulk	11	11.1	52	52.2				
11-52-0	Chester	7083	bulk	11	11.6	52	52.7				
18-46-0	Hingham	7094	bulk	18	17.9	46	46.8				
11-52-0	Hingham	7095	bulk	11	11.1	52	53.4				
Simplot Triple Super Phosphate 0-45-0	Ronan	7119	bulk			45	45.7				
TRI-ANGLE AGRICULTURAL SUPPLY Box 1426 Conrad, MT 59425											
10-30-0	Conrad	6895	liquid	10	9.2*	30	28.2*				
8-24-8	Conrad	6896	liquid	8	8.1	24	23.1*	8	7.5		
TRIANGLE TERMINAL COOP ASSN. Box 185 Brady, MT 59416											
34-0-0	Brady	6921	bulk	34	33.9						
18-46-0	Brady	6922	bulk	18	17.7	46	46.0				

COMMERCIAL FERTILIZER ANALYSIS

MANUFACTURER/DISTRIBUTOR BRAND/PRODUCT NAME	PLACE OF COLLECTION	SAMPLE NUMBER	BAG/ BULK	NITROGEN C	NITROGEN F	P_2O_5 C	P_2O_5 F	K_2O C	K_2O F	MICRONUTRIENT C	MICRONUTRIENT F
TRIANGLE TERMINAL COOP ASSN. Box 237 Dutton, MT 59433											
0-0-62	Dutton	6925	bulk					62	62.1		
USS AGRI-CHEMICALS Box 25126 Salt Lake City, UT 84125											
34-0-0	Billings	6648	bulk	34	34.4						
VALCO AGRI SERVICE Box 129 Glasgow, MT 59230											
34-0-0	Glasgow	6693	bulk	34	34.6						
18-46-0	Glasgow	6694	bulk	18	17.2*	46	47.1				
WAYNE HUNTER, INC. Box 24 Jordan, MT 59337											
18-46-0	Jordan	6835	bulk	18	17.7	46	46.7				
WOLFKILL Box 578 Monroe, WA 98772											
34-0-0	Jordan	6826	bulk	34	34.2						

SPECIALTY FERTILIZERS

CHARLES H. LILLY COMPANY 7737 NE Killingsworth Portland, OR 97218											
Lilly/Miller Feed & Weed	Billings	6775		12	14.1	2	2.3	3	3.2		
Lilly/Miller Lawn Food	Billings	6776		16	16.3	2	2.0	4	4.9		
Lilly/Miller Super Rich Lawn Food	Billings	6777		12	14.2	3	3.0	6	5.2*		
Lilly/Miller MorCrop	Billings	6782		10	9.3*	20	17.2*	20	23.1		
CHEVRON CHEMICAL COMPANY 940 Hensley Street Richmond, CA 94804											
Ortho Liquid Plant Food	Sidney	6786		12	13.6	6	6.3	6	5.8		
Ortho General Purpose Plant Food	Sidney	6787		8	8.8	8	8.8	8	8.1		

MANUFACTURER/DISTRIBUTOR BRAND/PRODUCT NAME	PLACE OF COLLECTION	SAMPLE NUMBER	BAG/ BULK	NITROGEN C	NITROGEN F	P_2O_5 C	P_2O_5 F	K_2O C	K_2O F	MICRONUTRIENT	MICRONUTRIENT C	MICRONUTRIENT F
CHEVRON CHEMICAL COMPANY (continued)												
Ortho Evergreen & Tree Food	Sidney	6788		12	11.9	6	6.7	6	6.2			
Ortho Rose Food	Sidney	6789		8	7.1*	12	11.8	4	4.3			
Ortho Tomato Food	Sidney	6790		5	6.5	10	11.3	10	11.4			
ESTECH, INC. 4060 East 26th Street Los Angeles, CA 90023												
Sears Superfine Lawn Food	Billings	6778		27	25.4*	3	3.3	3	4.3			
Sears Superfine Professional Lawn Food	Billings	6779		34	33.4	4	3.3	4	4.0			
Sears Green Karpet Weed & Feed	Billings	6780		10	9.8	6	6.0	4	4.8			
5-10-10	Missoula	6791		5	8.3	10	11.9	10	7.8*	Iron	1.5	1.6
K-Mart Super K-Gro Weed & Feed	Billings	6811		25	27.0	3	2.9	3	4.0			
K-Mart Super K-Gro Lawn Food	Billings	6812		27	27.7	3	3.4	3	3.5			
MAGNOLIA PRODUCTS, INC. 500 Seventh Avenue South Kirkland, WA 98033												
Malmo Bulb Fertilizer	Great Falls	6808		4	4.0	10	9.5	10	8.6*	Iron	0.6	2.1
Malmo All-Purpose Tomato & Vegetable Fertilizer	Great Falls	6809		5	4.5	10	8.4*	10	10.2			
MORGRO CHEMICAL COMPANY Box 151048 Salt Lake City, UT 84115												
Morgro 6-10-4	Helena	6793		6	6.0	10	7.7*	4	3.5*	Sulfur Iron	2 1	8.0 1.6
NORTHRUP KING COMPANY 1500 Jackson Street NE Minneapolis, MN 55413												
Northrup King Lawn Food	Billings	6784		24	23.9	6	8.8	3	2.4*			
Northrup King Triple Tonic	Billings	6785		18	21.8	3	4.1	5	5.8			
PAX COMPANY 380 West 13th Street Salt Lake City, UT 84115												
Coast to Coast Flower and Garden Fertilizer	Hamilton	6665		5	5.2	10	10.0	5	4.9	Sulfur	10	9.7
Montgomery Ward Lawn Fertilizer	Billings	6813		20	20.3	10	11.9	5	5.1			

SPECIALTY FERTILIZERS

MANUFACTURER/DISTRIBUTOR BRAND/PRODUCT NAME	PLACE OF COLLECTION	SAMPLE NUMBER	BAG/ BULK	NITROGEN C	NITROGEN F	P_2O_5 C	P_2O_5 F	K_2O C	K_2O F	MICRONUTRIENT	MICRONUTRIENT C	MICRONUTRIENT F
PEAVEY COMPANY 730 Second Avenue South Minneapolis, MN 55402												
Dyna-Gro Lawn Fertilizer	Billings	6774		20	21.5	10	13.5	5	5.4			
PLANT FOOD COOP 1270 South 24th Street West Billings, MT 59104												
Cenex 16-16-16	Billings	7052		16	15.1*	16	15.6	16	16.0			
ROSS DANIELS, INC. 1720 Fuller Road West Des Moines, IA 50265												
Ross Gro-Stakes	Great Falls	6810		10	11.1	10	11.9	10	10.7	Sulfur Iron Zinc	15 .45 .45	10.4* .81 .77
STERN'S NURSERIES, INC. 607 West Washington Street Geneva, NY 14456												
Miracid 30-10-10	Helena	6792		30	30.8	10	10.4	10	10.1			
VOLUNTARY PURCHASING GROUPS, INC. Box 460 Bonham, TX 75418												
Ferti-Lome New Lawn Starter	Billings	6781		9	9.7	13	14.2	7	7.0			
Ferti-Lome Gardener's Special	Billings	6783		11	12.0	15	15.8	11	10.8			

COMMERCIAL	NO. ANALYZED	NO. DEFICIENT	% DEFICIENT
Nitrogen	440	24	5.5
P_2O_5	287	9	3.1
K_2O	88	3	3.4
Sulfur	55	3	5.5
Zinc	1	0	--
Calcium	1	0	--
Magnesium	1	1	--

FERTILIZER SAMPLING

YEAR	NO. SAMPLES TAKEN	NO. SAMPLES DEFICIENT	% DEFICIENT
1977	448	32	7.1
1978	533	30	5.6
1979	365	21	5.7
1980	506	27	5.3
1981	428	24	5.1
1982	607	41	6.7
1983	558	50	8.9

SPECIALTY	NO. ANALYZED	NO. DEFICIENT	% DEFICIENT
Nitrogen	28	4	14.3
P_2O_5	28	3	10.7
K_2O	28	5	17.9
Sulfur	3	1	--
Iron	4	0	--
Zinc	1	0	--

FERTILIZER TONNAGE

YEAR	TONNAGE
1972	226,939
1973	268,061
1974	219,197
1975	170,324
1976	283,925
1977	259,211
1978	301,487
1979	324,838
1980	295,958
1981	363,295
1982	384,387
1983	447,407

FERTILIZER AND FERTILIZER MATERIAL SOLD IN MONTANA
By Crop Reporting Districts

January - June 1983

	NORTH WEST	NORTH CENTRAL	NORTH EAST	CENTRAL	SOUTH WEST	SOUTH CENTRAL	SOUTH EAST	OUT OF STATE
Anhydrous Ammonia	534	11,317	1,306	6,218	519	1,088	377	5,769
Ammonium Nitrate	3,276	16,084	1,517	9,796	4,671	7,617	1,853	1,791
Ammonium Sulfate	845	2,091	479	980	1,657	1,503	205	10
Ammonium Thiosulfate	136	261	156	335	150	0	0	1,478
Urea	572	12,800	3,261	5,970	902	2,915	800	2,114
Nitrogen Solutions	939	2,520	2,735	6,174	810	2,813	444	146
0-44-0, 0-45-0	236	429	112	66	850	671	378	0
Phosphoric Acid	40	553	0	50	0	102	0	0
Potash	1,516	4,352	558	1,755	651	1,171	700	148
Compost	588	0	0	0	0	0	0	90
Gypsum, Lime & Sulfur	268	1,097	16	0	53	698	57	314
Micronutrient Materials	5	72	20	122	65	115	36	670
18-46-0	748	13,345	10,753	4,752	1,618	5,478	2,447	0
16-20-0	3,060	1,130	652	1,762	3,328	1,461	54	0
11-48-0 -- 11-55-0	1,021	17,321	3,015	11,639	2,505	1,273	575	551
30-10-0	315	219	10	292	48	411	0	0
10-34-0	345	3,684	1,830	964	530	8	78	0
2-1-0 ratios i.e. 27-14-0	638	419	65	308	20	180	0	0
1-1-0 ratios i.e. 23-23-0	0	377	75	85	9	99	0	0
1-1-1 ratios i.e. 16-16-16	567	258	0	0	1	43	7	0
Misc. Custom Blends, i.e.								
20-10-10, 31-11-11, 25-12-10	935	458	23	0	5	71	0	0
25-16-0, 17-26-0, 22-11-0	120	356	100	0	26	153	0	0
20-14-5, 25-10-5, 18-5-3	68	393	0	473	0	15	0	0
8-10-4, 6-27-13, 4-35-3	279	371	0	0	16	610	0	0
0-22-22, 10-20-20, 10-10-27	42	184	0	0	2	14	0	0
20-0-10, 15-0-12, 3-0-12	18	435	0	0	0	327	0	0
Misc. Spec. Fert., i.e.								
19-3-3, 22-3-3, 26-4-7	0	0	0	11	4	9	0	861
9-18-9	0	0	0	3	3	9	0	415
	17,111	90,526	26,683	51,755	18,443	28,854	8,011	14,449

FERTILIZER AND FERTILIZER MATERIAL SOLD IN MONTANA
By Crop Reporting Districts

July - December 1983

	NORTH WEST	NORTH CENTRAL	NORTH EAST	CENTRAL	SOUTH WEST	SOUTH CENTRAL	SOUTH EAST	OUT OF STATE
Anhydrous Ammonia	98	17,763	967	8,810	355	2,136	384	5,004
Ammonium Nitrate	562	8,390	1,179	4,321	3,253	3,085	356	104
Ammonium Sulfate	316	1,457	244	700	636	153	29	302
Ammonium Thiosulfate	14	750	0	241	49	0	68	1,319
Urea	108	10,155	1,311	2,649	401	1,594	332	149
Nitrogen Solutions	91	5,241	486	1,150	395	1,808	75	3
0-44-0, 0-45-0	152	83	75	117	442	266	128	0
Phosphoric Acid	0	483	0	0	0	239	0	98
Potash	527	3,005	793	1,434	607	583	274	26
Compost	92	0	0	0	0	0	0	2
Gypsum, Lime & Sulfur	69	983	16	0	53	804	51	140
Micronutrient	2	105	59	9	4	51	3	30
18-46-0	367	6,515	6,716	2,803	902	5,694	2,672	338
16-20-0	832	984	215	980	1,910	750	154	240
11-48-0 -- 11-55-0	480	23,478	2,725	10,621	2,271	3,299	624	360
30-10-0	0	0	0	8	0	46	0	0
10-34-0	68	5,579	331	676	0	24	111	0
2-1-0 ratios i.e. 27-14-0	26	134	8	52	1,300	40	2	23
1-1-0 ratios i.e. 23-23-0	0	98	169	57	21	19	0	13
1-1-1 ratios i.e. 16-16-16	129	19	0	0	2	2	3	0
Misc. Custom Blends, i.e.								
20-10-10, 31-11-11, 25-12-10	0	243	0	133	0	508	62	0
25-16-0, 17-26-0, 22-11-0	0	374	30	25	0	298	8	0
20-14-5, 25-10-5, 18-5-3	0	506	0	30	0	90	0	0
8-10-4, 6-27-13, 4-35-3	144	571	35	67	0	447	97	0
0-22-22, 10-20-20, 10-10-27	0	254	0	20	0	91	0	0
20-0-10, 15-0-12, 3-0-12	0	565	0	40	0	340	0	0
Misc. Spec. Fert., i.e.								
3-3, 22-3-3, 26-4-7	0	68	0	25	0	0	0	308
9-18-9	0	86	0	5	0	0	0	417
	4,077	87,889	15,359	34,973	12,601	22,367	5,433	8,876

MONTANA DEPARTMENT OF AGRICULTURE
SUMMARY OF FERTILIZER AND FERTILIZER MATERIAL SOLD IN MONTANA

	Materials	TONS January-June	July-December	TOTAL
1.	Anhydrous Ammonia	27,128	35,517	62,645
2.	Ammonium Nitrate	46,605	21,250	67,855
3.	Ammonium Sulfate	7,862	3,837	11,699
4.	Ammonium Thiosulfate	2,516	2,441	4,957
5.	Urea	29,334	16,699	46,033
6.	Nitrogen Solutions	16,581	9,249	25,830
7.	0-44-0, 0-45-0	2,742	1,263	4,005
8.	Phosphoric Acid	745	820	1,565
9.	Potash	10,851	7,249	18,100
10.	Compost	678	94	772
11.	Gypsum, Lime & Sulfur	2,503	2,116	4,619
12.	Micronutrient Materials	1,105	263	1,368
	Ammoniated Phosphates & Mixtures			
13.	18-46-0	39,141	26,007	65,148
14.	16-20-0	11,447	6,065	17,512
15.	11-48-0 -- 11-55-0	37,900	43,858	81,758
16.	30-10-0	1,295	54	1,349
17.	10-34-0	7,439	6,789	14,228
18.	2-1-0 ratios i.e. 27-14-0	1,630	1,585	3,215
19.	1-1-0 ratios i.e. 23-23-0	645	377	1,022
20.	1-1-1 ratios i.e. 16-16-16	876	155	1,031
	Misc. Custom Blends, i.e.			
21.	20-10-10, 31-11-11, 25-12-10	1,492	946	2,438
22.	25-16-0, 17-26-0, 22-11-0	755	735	1,490
23.	20-14-5, 25-10-5, 18-5-3	949	626	1,575
24	8-10-4, 6-27-13, 4-35-3	1,276	1,361	2,637
25.	0-22-22, 10-20-20, 10-10-27	242	365	607
26.	20-0-10, 15-0-12, 3-0-12	780	945	1,725
	Misc. Spec. Fert., i.e.			
27.	19-3-3, 22-3-3, 26-4-7	885	401	1,286
28.	9-18-9	430	508	938
	TOTAL: ALL FERTILIZERS AND MATERIALS	255,832	191,575	447,407
	Total Nitrogen	73,575	60,450	134,025
	Total P_2O_5	45,267	40,760	86,027
	Total K_2O	7,063	4,820	11,883

MONTANA DEPARTMENT OF AGRICULTURE
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AGRICULTURE/LIVESTOCK BLDG.
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